

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended) A method of cultivating multipotent stem cells, comprising:

(a) cultivating multipotent stem cells while rotating said multipotent stem cells about at least two orthogonal axes, thereby suppressing differentiation of said multipotent stem cells sealed in a first cultivating container to obtain cultivated multipotent stem cells; and then

(b) cultivating said cultivated multipotent stem cells while applying at least a centrifugal force by rotating a force to said cultivated multipotent stem cells about one axis, thereby sealed in a second cultivating container and inducing differentiation of said cultivated multipotent stem cells.

2-7. (Cancelled)

8. (Currently Amended) The method of cultivating multipotent stem cells according to claim 1, wherein in step (b), said cultivated multipotent stem cells are cultured in a medium including a differentiation inducing agent is mixed in the medium in the second cultivating container.

9. (Currently Amended) The method of cultivating multipotent stem cells according to claim 1, wherein said step (a) cultivating and said step (b) cultivating step are carried out in a common cultivating container a same apparatus.

10. (Cancelled)

11. (Withdrawn) A cultivating apparatus of multipotent stem cells comprising:

an inner frame to which a cultivating container accommodating multipotent stem cells is attached;

an outer frame configured to rotatably support said inner frame;

a first motor configured to rotate said inner frame around a first rotation axis;

a supporting section configured to rotatably support said outer frame; and

a second motor configured to rotating said outer frame around a second rotation axis.

12. (Withdrawn) The cultivating apparatus according to claim 11, wherein said second rotation axis is in a direction of gravitation.

13. (Withdrawn) The cultivating apparatus according to claim 12, wherein said first rotation axis is in a direction orthogonal to said second rotation axis.

14. (Withdrawn) The cultivating apparatus according to claim 11, wherein said second motor can be operated independently of said first motor.

15. (Withdrawn) The cultivating apparatus according to claim 14, wherein said inner frame can be fixed to a predetermined rotation position.

16. (Withdrawn) The cultivating apparatus according to claim 11, wherein said cultivating container is attached to said inner frame in a vicinity of a crossing point between said first rotation axis and said second rotation axis.

17. (Withdrawn) The cultivating apparatus according to claim 16, wherein when said multipotent stem cells are cultivated while said differentiation of said multipotent stem cells is suppressed, said cultivating container is attached to said inner frame in the vicinity of the crossing point between said first rotation axis and said second rotation axis, and when the differentiation of said multipotent stem cells are induced, said cultivating container is attached to an end portion of said inner frame.

18. (Withdrawn) The cultivating apparatus according to claim 11, wherein when said cultivating container is attached to an end portion of said inner frame.

19. (Currently Amended) A cultivating system of multipotent stem cells, comprising:

first means for cultivating multipotent stem cells while rotating said multipotent stem cells about at least two orthogonal axes ~~suppressing differentiation of said multipotent stem cells sealed in a first cultivating container~~; and

second means for cultivating the cultivated multipotent stem cells while applying at least a centrifugal force by rotating a force to the cultivated multipotent stem cells about one axis

~~sealed in a second cultivating container to promote the differentiation of the multipotent stem cells.~~

20-26. (Cancelled)

27. (Currently Amended) The cultivating system of multipotent stem cells according to claim 19, wherein said first means and said second means include a common cultivating container ~~and said second cultivating container are same.~~

28. (Currently Amended): The method of cultivating multipotent stem cells according to claim 1, wherein said at least two orthogonal axes includes a first rotation axis and a second rotation axis,

wherein said step (a) cultivating comprises:

attaching a said first cultivating container, containing said multipotent stem cells,
to an inner frame of an apparatus which is [[:]] rotatably supported ~~supporting said inner frame~~ by an outer frame of the apparatus;

rotating said inner frame around [[a]] the first rotation axis; and

rotating said outer frame around [[a]] the second rotation axis, and

wherein ~~said attaching comprises attaching~~ said first cultivating container is attached to said inner frame in a vicinity of a crossing point between said first rotation axis and said second rotation axis.

29. (Currently Amended) The method of cultivating multipotent stem cells according to claim [[25]] 28, wherein said step (b) cultivating comprises:

attaching [[said]] a second cultivating container, containing said cultivated multipotent stem cells, to an end portion of said inner frame;

~~rotatably supporting said inner frame by said outer frame;~~

rotating said inner frame around said first rotation axis; and

rotating said outer frame around said second rotation axis ~~, axis, and~~

~~wherein said attaching said second cultivating container comprises attaching said second cultivating container to an end portion of said inner frame.~~

30. (Currently Amended) The method of cultivating multipotent stem cells according to claim 1, wherein said at least two orthogonal axes includes a first rotation axis and a second rotation axis,

wherein said step (b) cultivating comprises:

attaching [[said]] a second cultivating container to an end portion of an inner frame of an apparatus which is [[;]] rotatably supported ~~supporting said inner frame~~ by an outer frame of the apparatus; ~~rotatably supporting said inner frame by an outer frame;~~

rotating said inner frame around a first rotation axis; and

rotating said outer frame around a second rotation axis ~~, and~~

~~wherein said attaching said second cultivating container comprises attaching said second~~

~~cultivating container to an end portion of said inner frame.~~

31. (New) The method of cultivating multipotent stem cells according to claim 1, wherein said step (a) and said step (b) are carried out in different cultivating containers.

32. (New) The method of cultivating multipotent stem cells according to claim 1, wherein said step (a) and said step (b) are carried out in a common apparatus.

33. (New) The method of cultivating multipotent stem cells according to claim 1, wherein said step (a) and said step (b) are carried out in different apparatuses.

34. (New) The cultivating system of multipotent stem cells according to claim 19,
wherein said first means and said second means are the same, and
wherein a cultivating container is attached to an end portion of an inner frame of said first
and second means.

35. (New) The cultivating system of multipotent stem cells according to claim 19, wherein said first means and said second means are different.